DICOM Conformance Statement Cios Fit (VA12A onwards)

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1 Conformance Statement Overview

This DICOM Conformance Statement is valid for the following products:

- Cios Fit (VA12A onwards)

The Cios Fit (VA12A onwards) is designed to be integrated into an environment of medical, DICOM based devices. The Cios Fit (VA12A onwards) supports storage of images utilizing the DICOM Storage Service Class, Storage Commitment, Worklist support for querying from RIS, and Printing of viewing results which is provided with Print Management Services.

Cios Fit (VA12A onwards) conforms to the DICOM Standard and supports the network services as described in Table 1: Network Services.

SOP Classes	SOP Class UID	User of Service (SCU)		Provider of Service (SCP)	
Verification					
Verification	1.2.840.10008.1.1	Yes		No	
SOP Classes Managed by Cios Fit					
		Create	**Send**	**Store**	**Display**
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1	Yes	Yes	No	No
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Yes	Yes	No	No
X-Ray Radiation Dose SR	1.2.840.10008.5.1.4.1.1.88.67	Yes	Yes	No	No
Radiation Dose SR Secondary Capture	1.2.840.10008.5.1.4.1.1.7	Yes	Yes	No	No
Storage Commitment					
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	Yes		No	
Worklist Management					
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31	Yes		No	
Print Management					
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9	Yes		No	

Table 1: Network Services

Media Storage Application Profile	Write DICOM Files (Without DICOMDIR)	Read DICOM Files
USB		
STD-GEN-USB-J2K	Yes	No

Table 2 - Media Services

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Name	Value
Application Context Name	1.2.840.10008.3.1.1.1
Implementation Class UID	1.3.12.2.1107.5.18.1
Implementation Version Name	SIEMENS_CIOS_FIT

Table 3: Implementation Identifying Information

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3 Introduction

3.1 Audience

This document is intended for hospital staff, health system integrators, software designers or implementers. It is assumed that the reader has a working understanding of DICOM.

3.2 Remarks

The scope of this Conformance Statement is to facilitate communication with Cios Fit (VA12A onwards) DICOM Service and other DICOM products. The Conformance Statement should be read and understood in conjunction with the DICOM Standard. DICOM by itself does not guarantee interoperability.

The Conformance Statement facilitates a first-level validation for interoperability between different applications supporting the same DICOM functionality.

This Conformance Statement is not supposed to replace validation with other DICOM equipment to ensure proper exchange of intended information. In fact, the user should be aware of the following important issues:

- The comparison of conformance statements is the first step towards assessing interconnectivity and interoperability between Cios Fit (VA12A onwards) and other DICOM conformant equipment.
- Test procedures should be defined and executed to validate the required level of interoperability with specific compatible DICOM equipment, as established by the healthcare facility.

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3.3 Definitions, Terms and Abbreviations

Definitions, terms and abbreviations used in this document are defined within the different parts of the DICOM standard.

Additional Abbreviations and terms are as follows:

Abbreviation	Definition
AE	Application Entity
AET	Application Entity Title
ASCII	American Standard Code for Information Interchange
DB	Data Base
DICOM	Digital Imaging and Communications in Medicine
DIMSE	DICOM Message Service Element
IOD	Information Object Definition
ISO	International Organization for Standardization
IP Address	Internet Protocol address
NEMA	National Electrical Manufacturers Association
n.a.	Not Applicable
PACS	Picture Archiving and Communication System.
PDU	Protocol Data Unit
RDSR	Radiation Dose Structured Report
RIS	Radiology Information System
RSP	Response
RQ	Request
SCP	Service Class Provider

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SCU	Service Class User
SC	Secondary Capture
SCSR	Secondary Capture of Dose Report
SR	Structured Report
SOP	Service Object Pair
TLS	Transport Layer Security
UI	User Interface
UID	Unique Identifier
UTF-8	8-bit Unicode Transformation Format
VR	Value Representation
XA	X-Ray Angiographic

Table 4: Abbreviations

3.4 References

[1] NEMA PS3 / ISO 12052, Digital Imaging and Communications in Medicine (DICOM) Standard, National Electrical Manufacturers Association, Rosslyn, VA, USA (available free at http://medical.nema.org/)[1]

[2] Integrating the Healthcare Enterprise – IHE Radiology Technical Framework – http://www.ihe.net

[1] *The DICOM Standard is under continuous maintenance, the current official version is available at http://dicom.nema.org*

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4 Networking

4.1 Implementation Model

4.1.1 Verification

Cios Fit (VA12A onwards) DICOM Service Tool application requests Verification to prove the ability of a remote DICOM application to respond to DICOM messages.

4.1.2 Storage

The Cios Fit (VA12A onwards) DICOM implementation is able to initiate associations for Storage of DICOM Composite Information Objects to Remote AEs.

4.1.3 Storage Commitment

Cios Fit (VA12A onwards) is able to initiate requests for Storage Commitment Push (for previously sent DICOM Composite Information Objects) to Remote AEs and to receive response back from SCP notifying the safekeeping of transferred DICOM data.

4.1.4 Print

Cios Fit (VA12A onwards) supports to print patient's diagnostics images on a DICOM printer. It should use standard DICOM mechanism to print images. Basic Grayscale Image Box shall be used for printing the images.

4.1.5 Worklist

Cios Fit (VA12A onwards) DICOM implementation is able to query and fetch worklist information from a Modality Worklist SCP in order to associate patient demographics of data being scanned.

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4.1.6 Application Data Flow

The following sections illustrate the application's data flow models.

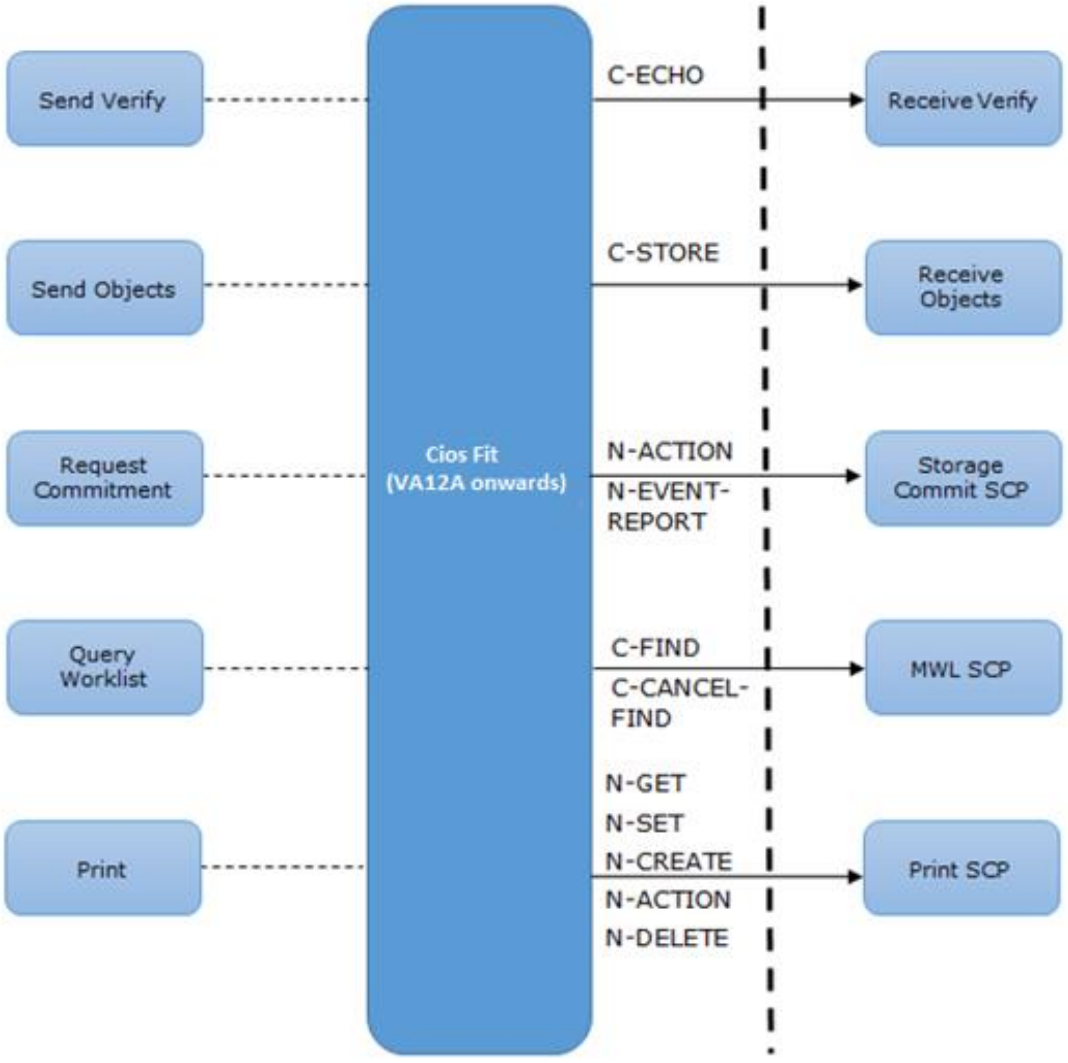

Figure 1: Application Data Flow

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4.1.7 Functional Definitions of Application Entities

Cios Fit (VA12A onwards) can act as a Modality Worklist SCU, Verification SCU, Storage SCU, Print SCU and Storage Commitment SCU. Each SCU will be started based on the user action.

4.1.7.1 Functional Definition of Verification AE

4.1.7.1.1 Functional Definition of Verification SCU AE

The DICOM Verification service is used to verify DICOM connectivity between two DICOM nodes. In Cios Fit (VA12A onwards) application, DICOM Verification can be used to verify whether the DICOM network nodes for Worklist, Storage and Print are alive or not.

4.1.7.2 Functional Definition of Storage AE

4.1.7.2.1 Functional Definition of Storage SCU AE

Cios Fit (VA12A onwards) supports the DICOM export of image/ dose report. An association is negotiated with the destination AE and the image data is transferred using the C-STORE DIMSE Service. DICOM Export shall be used to transfer image acquired in Cios Fit (VA12A onwards) with image processing parameters (XA), Secondary Capture (SC) images, Secondary Capture of Dose Report and Structured Dose Report (RDSR) from Cios Fit (VA12A onwards) to another DICOM server over network. Cios Fit (VA12A onwards) supports following different type of data for DICOM Export in uncompressed format:

- XA Image - Image acquired in Cios Fit (VA12A onwards) with image processing parameters.
- Secondary Capture Image - X-Ray acquired image with burned annotations and image processing parameters.
- X-Ray radiation dose SR - The exposure characteristics and dose from X-Rays generated by Cios Fit (VA12A onwards).
- Secondary Capture of Dose Report.

4.1.7.3 Functional Definition of the Storage Commitment AE

4.1.7.3.1 Functional Definition of Storage Commitment SCU AE

Cios Fit (VA12A onwards) is able to perform the Storage Commitment request (N-ACTION) to a remote application entity. This is applicable for XA Image, SC, SCSR and SR. Cios Fit (VA12A onwards) application shall wait on same association for N-EVENT-REPORT-RQ till a time out value (maximum of 10 seconds) has been reached and thereafter the association closes. Once the requested association is closed, the commitment response is expected on a different association that has to be established by the remote storage Commitment SCP. After receiving a storage commitment response (N-EVENT-REPORT), the confirmed XA image will be marked in the database as archived.

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4.1.7.4 **Functional Definition of Modality Worklist AE**

4.1.7.4.1 Functional Definition of Modality Worklist SCU AE

The Cios Fit (VA12A onwards) worklist SCU is invoked from the patient mode to request the worklist from a remote Information System (Modality Worklist Class SCP). The worklist SCP responses to the C-FIND query and scheduled imaging service requests (scheduled procedure steps) and patient demographic information will be “pulled” from the information system to the Cios Fit (VA12A onwards) modality.

Furthermore, the patient-based Query dialog from the patient mode allows entering specific matching criteria (“narrow query”) for the worklist query. With the response data the Patient Registration dialog can be populated according to the availability within the worklist response identifier.

4.1.7.5 **Functional Definition of Print AE**

4.1.7.5.1 Functional Definition of Print SCU AE

The Cios Fit (VA12A onwards) DICOM print application supports the print management DIMSE services as SCU.

The Cios Fit (VA12A onwards) Print SCU is invoked by the user interface to setup film-sheet layout and whenever an image is ready to be printed on film. Whenever a film-sheet is ready to print the related data is used to supply the Information to the SOP Classes of the Print Management Service Class.

Basic Grayscale Image Box shall be used for printing the images.

4.1.8 **Sequencing of Activities**

4.1.8.1 **Verification**

Cios Fit (VA12A onwards) DICOM Service tool application can send C-ECHO request to verify DICOM connectivity to a pre-configured remote SCP.

4.1.8.2 **Storage**

The object to be transferred are selected within the Cios Fit (VA12A onwards) Application UI and transfer is manually activated by the user. The referenced objects are then sent to the remote DICOM node (Storage SCP). Prior to sending image, Cios Fit (VA12A onwards) is able to apply image processing parameter and annotation in order to prepare image pixel contents with required information.

4.1.8.3 **Storage Commitment**

If Storage Commitment is configured for remote DICOM node, after successful transmission of images Cios Fit (VA12A onwards) automatically triggers storage commitment request.

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4.1.8.4 **Query Worklist**

DICOM Worklist button in Home screen allows user to download last three days (Total 4 days including today) scheduled patients from Modality Worklist SCP. Only 'XA' modality patients shall be downloaded. The “narrow” (interactive) Worklist Query requires that sufficient matching keys or a unique matching key are/is entered before the query is issued.

4.1.8.5 **Print**

Cios Fit (VA12A onwards) supports to print patient's diagnostics images on a DICOM printer. Basic Grayscale Image Box shall be used for printing the images. The layout print settings may be adapted and the print job is sent to the printer.

4.2 Application Entity Specification

This section outlines the specifications for each of the Application Entities that are part of the Cios Fit (VA12A onwards).

4.2.1 Verification AE Specification

4.2.1.1 SOP Classes

The Verification AE of the Cios Fit (VA12A onwards) provides standard conformance to the Verification SOP Class listed in “Table 1: Network Services” section "Verification" in the “Conformance Statement Overview”

4.2.1.2 Association Policy

4.2.1.2.1 General

Cios Fit (VA12A onwards) application opens an association for verification request when user selects the “Echo” button from Remote settings page.

4.2.1.2.2 Number of Associations

Cios Fit (VA12A onwards) application initiates one association at a time for the verification request.

4.2.1.2.3 Asynchronous Nature

Cios Fit (VA12A onwards) application does not support asynchronous communication (multiple outstanding transactions over a single association).

4.2.1.2.4 Implementation Identifying Information

For Implementation Identifying Information please refer to “ Table 3: Implementation Identifying Information“ in the “Conformance Statement Overview”.

Cios Fit (VA12A onwards) application does not support communication in secure way via TLS with other configured remote DICOM nodes.

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4.2.1.3 **Association Initiation Policy**

4.2.1.3.1 Activity – “Send Verification” Request

4.2.1.3.1.1 Description and Sequencing of Activity

The Verification SCU C-ECHO request is initiated by Cios Fit (VA12A onwards) whenever "Verification" is requested. If an association to a remote Application Entity is successfully established, Verification with the configured AET is requested via the open association.

After receiving C-ECHO Response from the remote Application, the response status will be indicated to user and the association will be closed.

4.2.1.3.1.2 Proposed Presentation Contexts

Cios Fit (VA12A onwards) application will propose Presentation Contexts as shown in the following table:

Presentation Context Table – “Verification”					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Description	**UID**	**Name**	**UID**		
Verification	1.2.840.10008.1.1	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	n.a.
		Implicit VR Little Endian	1.2.840.10008.1.2		

Table 5: Presentation Context Table for Verification

4.2.1.3.1.3 SOP Specific Conformance – Verification SCU

Cios Fit (VA12A onwards) application conforms to the definition of the Verification SCU in accordance to the DICOM Standard

4.2.1.4 Association Acceptance Policy

n.a.

4.2.2 **Storage SCU AE Specification**

4.2.2.1 **SOP Classes**

For SOP Classes supported, please refer “Table 1: Network Services” section " SOP Classes Managed by the Cios Fit" in the “Conformance Statement Overview”

4.2.2.2 **Association Policy**

4.2.2.2.1 General

Cios Fit (VA12A onwards) application supports to export the images into the specified DICOM Server (e.g. PACS). User can export images acquired in Cios Fit (VA12A onwards) with image processing parameters such as brightness, contrast correction (Window Level -WL, Window Centre-WC in DICOM, LUT), rotation, flip and edge enhancement. During the export process user can cancel the operation. There is also an option export dose details to another DICOM Server as SR and SC.

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Whenever user try to export the images or dose details to another DICOM Server an association request is sent to the destination AE and, upon successful negotiation of a Presentation Context, the transfer will initiate. Association will be closed after the successful completion of image transfer or if any error occurred during the transaction. If failed to create association then application will retry 3 times with an interval of 500ms.

4.2.2.2.2 Number of Associations

Cios Fit (VA12A onwards) application has one association at a time for the storage request.

4.2.2.2.3 Asynchronous Nature

Cios Fit (VA12A onwards) application does not support asynchronous communication (multiple outstanding transactions over a single association).

4.2.2.2.4 Implementation Identifying Information

For Implementation Identifying Information please refer to "Table 3: Implementation Identifying Information" in the "Conformance Statement Overview"

4.2.2.3 **Association Initiation Policy**

Cios Fit (VA12A onwards) application initiates the job by sending the C-STORE command to the destination AE.

4.2.2.3.1 Activity – "Send Storage Request"

4.2.2.3.1.1 Description and Sequencing of Activities

Cios Fit (VA12A onwards) application will trigger the C-STORE request to the remote server whenever a user export request came and try to establish an association with the remote AE. If association is created successfully it will start to transfer the images from the local disk to remote server. The same association will be used in case of multiple images. Remote AE will send the SUCCESS or ERROR status as response for the C-STORE request. In failure case the association will be aborted.

4.2.2.3.1.2 Proposed Presentation Contexts

Cios Fit (VA12A onwards) Application use following presentation contexts for the DICOM Export.

Abstract Syntax		**Transfer Syntax**		**Role**
Description	**UID**	**Name**	**UID**	
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian.	1.2.840.10008.1.2	

Table 6: XA Standard SOP Class presentation context

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Abstract Syntax		Transfer Syntax		Role
Description	**UID**	**Name**	**UID**	
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian.	1.2.840.10008.1.2	

Table 7: Secondary Capture Image IOD

Abstract Syntax		Transfer Syntax		Role
Description	**UID**	**Name**	**UID**	
X-Ray Radiation Dose SR	1.2.840.10008.5.1.4.1.1.88.67	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian	1.2.840.10008.1.2	

Table 8: X-Ray radiation Dose SR

4.2.2.3.1.3 SOP Specific Conformance for SOP Classes

Cios Fit (VA12A onwards) application will send uncompressed data to PACS server.

4.2.2.3.1.4 Optional Attributes

Please refer to the related Image Object definition tables in the Annexes (section “Created SOP Instances”) for a list of all DICOM IOD attributes of type 2 and 3, which are encoded by Cios Fit (VA12A onwards).

4.2.2.3.1.5 Specialized Information Object Definitions

The DICOM images sent by Cios Fit (VA12A onwards) application conform to the DICOM IOD definitions (Standard extended IODs). Cios Fit (VA12A onwards) doesn’t have any private elements. The DICOM nodes are responsible for data consistency when modifying images.

4.2.2.4 **Association Acceptance Policy**

n.a.

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4.2.3 Storage Commitment AE Specification

4.2.3.1 SOP Classes

For SOP Classes supported ,please refer to “Table 1: Network Services” section " SOP Classes Managed by the Cios Fit " in the “Conformance Statement Overview”

4.2.3.2 Association Policy

4.2.3.2.1 General

Cios Fit (VA12A onwards) application can trigger commitment request to the remote AE once the storage operation completed successfully. User can configure whether “commitment” request is required or not in Cios Fit (VA12A onwards) application. Cios Fit application uses separate association for commitment request. The Commit Request (N-ACTION-RQ) is sent over a single opened association. If the Provider accepts the Storage Commitment request, the generated Transaction UID, together with study (study in case of SR and image in case of XA, SC, SCSR) identification data and a timestamp is retained for N-EVENT-REPORT-RQ processing.

Cios Fit (VA12A onwards) application shall wait on same association for N-EVENT-REPORT-RQ till a time out value (maximum of 10 seconds) has been reached and therefore the association closes. Once the requested association is closed, the commitment response is expected on a different association.

4.2.3.2.2 Number of Associations

Cios Fit (VA12A onwards) application has one association at a time.

4.2.3.2.3 Asynchronous Nature

Cios Fit (VA12A onwards) application does not support asynchronous communication (multiple outstanding transactions over a single association).

4.2.3.2.4 Implementation Identifying Information

For Implementation Identifying Information please refer to “Table 3: Implementation Identifying Information “ section in the “Conformance Statement Overview”

4.2.3.3 Association Initiation Policy

4.2.3.3.1 Activity “Send Initial Storage Commitment”

4.2.3.3.1.1 Description and Sequencing of Activities

N-ACTION-RQ request will trigger from Cios Fit (VA12A onwards) application to initiate the commit request after successfully completing the C-STORE operation.

4.2.3.3.1.2 Proposed Presentation Contexts

The Cios Fit(VA12A onwards) application attempts to accept a new association for DIMSE N-EVENT-REPORT for receiving commitment result from a previous request .Cios Fit (VA12A onwards) Application uses following presentation contexts for the DICOM Storage Commitment.

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Abstract Syntax		Transfer Syntax		Role
Description	**UID**	**Name**	**UID**	
Storage Commitment Push Model	1.2.840.10008.1.20.1	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian.	1.2.840.10008.1.2	

Table 9: Storage Commitment proposed presentation context

4.2.3.4 **Association Acceptance Policy**

4.2.3.4.1 Activity "Update Flag Information"

4.2.3.4.1.1 Description and Sequencing of Activities

After sending a Storage Commitment Request (N-ACTION-RQ), Cios Fit (VA12A onwards) application shall wait for the acceptance of request (N-ACTION-RSP), once success response received it will wait for N-EVENT-REPORT-RQ in same association or in a different association. This will be based on the configuration, by default it will be in different association. Incoming response (N-EVENT-REPORT-RQ) will be processed. The respective commitment status will be displayed in the UI, in case of failure, additional failure indicating message will be displayed in the UI status area. Commitment status shall be displayed in UI only for image; not for XA Secondary Capture and not for Dose Report, neither stored as Secondary Capture nor stored as DICOM Dose Report. Cios Fit (VA12A onwards) always sends N-EVENT-REPORT-RSP as "SUCCESS" irrespective of the commitment processing status.

Status	Error Code	Meaning	Description
Success	0000H	Success	The storage commitment result has been successfully received.

Table 10 : N-EVENT-REPORT-RSP Status

4.2.3.4.1.2 Accepted Presentation Contexts

The Cios Fit (VA12A onwards) application attempts to accept a new association for DIMSE N-EVENT-REPORT for receiving commitment result from a previous request.

Abstract Syntax		Transfer Syntax		Role
Description	**UID**	**Name**	**UID**	
Storage Commitment Push Model	1.2.840.10008.1.20.1	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCP
		Implicit VR Little Endian.	1.2.840.10008.1.2	

Table 11: Storage Commitment accepted presentation context

4.2.3.4.1.3 SOP-specific Conformance Statement for Storage SOP classes

If the Commitment response (N-EVENT-REPORT-RQ) received has the status of "complete – failure exists", the transaction is marked as failed, else the transaction is marked as "completed". In Failure cases, a message is shown in the status area. When commitment response is received, success/failure status is updated in local database corresponding to committed images.

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4.2.4 Modality Worklist AE Specification

4.2.4.1 SOP Classes

For SOP Classes supported, please refer to “Table 1: Network Services” section " SOP Classes Managed by the Cios Fit " in the “Conformance Statement Overview”

4.2.4.2 Association Policy

4.2.4.2.1 General

Cios Fit (VA12A onwards) application allows user to download last three days (Total 4 days including today) scheduled patients from RIS. Other than default download, patients scheduled in RIS can also be downloaded using filter parameters.

Filtering parameters are given below.

- Patient Name (0010,0010)
- Scheduled Procedure Step Start Date (0040,0002)
- Scheduled Procedure Step End Date (0040,0004)
- Requested Procedure Id (0040,1001)
- Accession Number (0008,0050)
- Modality (0008,0060)

During worklist download already imported patients will not be processed again. Already imported responses are identified using patient ID (0010, 0020), Accession number (0008, 0050), Requested Procedure ID (0040, 1001) and Study instance UID (0020, 000D) combination.

Cios Fit (VA12A onwards) application allows user to cancel currently running worklist with a C-FIND-CANCEL request.

4.2.4.2.2 Number of Associations

Cios Fit (VA12A onwards) application initiates one association at a time to query worklist data.

4.2.4.2.3 Asynchronous Nature

Cios Fit (VA12A onwards) application does not support asynchronous communication (multiple outstanding transactions over a single association).

4.2.4.2.4 Implementation Identifying Information

For Implementation Identifying Information please refer to “Table 3: Implementation Identifying Information” in the “Conformance Statement Overview”.

4.2.4.3 Association Initiation Policy

4.2.4.3.1 Activity “Querying a Remote Node” for Modality Worklist

4.2.4.3.1.1 Description and Sequencing of Activities

Cios Fit (VA12A onwards) application supports to download last three days (Total 4 days including today) scheduled patients from RIS by sending C-FIND request. Downloaded data will get from C-FIND-RSP. Only 'XA' modality patients shall be downloaded. Also it deletes the worklist data from previous queries when new data is received.

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4.2.4.3.1.2 Proposed Presentation Contexts

Abstract Syntax		Transfer Syntax		Role
Description	**UID**	**Name**	**UID**	
Modality Work-list Information Model – FIND	1.2.840.10008.5.1.4.31	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian.	1.2.840.10008.1.2	

Table 12: Modality worklist SOP Class presentation context

4.2.4.3.1.3 SOP Specific Conformance for SOP classes

Following tables gives the details about worklist request attributes.

Attribute Name	**Attribute Tag**	**VR**	**Value**
Scheduled Procedure Step Sequence	0040,0100	SQ	
>Item1			
>Scheduled Station AE Title	0040,0001	AE	empty
>Scheduled Procedure Step Start Date	0040,0002	DA	User Input/empty. Scheduled Step Start Date shall be retrieved with Single Value Matching or Range Matching. If both from and to date are given, SPS Start Date can be set as <Scheduled Procedure Step Start Date - Scheduled Procedure Step End Date>.
>Scheduled Procedure Step Start Time	0040,0003	TM	empty
>Modality	0008,0060	CS	XA
>Scheduled Performing Physician's Name	0040,0006	PN	empty
>Scheduled Procedure Step ID	0040,0009	SH	empty
Requested Procedure ID	0040,1001	SH	User Input/empty
Requested Procedure Description	0032,1060	LO	empty
Requested Procedure Code Sequence	0032,1064	SQ	empty
>Item1			
>Code Value	0008,0100	SH	empty
>Coding Scheme Designator	0008,0102	SH	empty

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Attribute Name	Attribute Tag	VR	Value
>Code Meaning	0008,0104	LO	empty
Study Instance UID	0020,000D	UI	empty
Referenced Study Sequence	0008,1110	SQ	empty
>Item1			
>Referenced SOP Class UID	0008,1150	UI	empty
>Referenced SOP Instance UID	0008,1155	UI	empty
Accession Number	0008,0050	SH	User Input/empty
Referring Physician's Name	0008,0090	PN	empty
Placer Order Number / Imaging Service Request	0040,2016	LO	empty
Filler Order Number / Imaging Service Request	0040,2017	LO	empty
Current Patient Location	0038,0300	LO	empty
Patient's Name	0010,0010	PN	User Input/empty. Wild card matching (*) is also possible. Matching shall be case insensitive.
Patient ID	0010,0020	LO	empty
Patient's Birth Date	0010,0030	DA	empty
Patient's Sex	0010,0040	CS	empty
Patient's Age	0010,1010	AS	empty
Patient’s Weight	0010,1030	DS	empty
Patient’s Size	0010,1020	DS	empty
Institution Name	0008,0080	LO	empty

Table 13: Worklist Request Attributes

Cios Fit (VA12A onwards) application checks below listed status codes in worklist response.

Service Status	Meaning	Error Codes
Success	Matching is complete	0000
Failed	Out of resources	A700
	Identifier does not match SOP Class	A900
	Unable to process	C001
Cancelled	Matching terminated due to cancel request	FE00
Pending	Matching is continuing	FF00

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Pending	Matching is continuing - Warning that one or more Optional Keys were not supported for existence and/or matching for this identifier	FF01

Table 14: C-FIND Response Status codes

4.2.4.4 Association Acceptance Policy

n.a.

4.2.5 Print AE Specification

4.2.5.1 SOP Classes

For SOP Classes supported, please refer to “Table 1: Network Services” section " SOP Classes Managed by the Cios Fit " in the “Conformance Statement Overview”.

4.2.5.2 Association Policy

4.2.5.2.1 General

Whenever Cios Fit (VA12A onwards) application successfully establishes an association to the remote printer, it will send N-GET, N-CREATE, N-SET, N-ACTION and N-DELETE requests. Basic grayscale Image Box shall be used for printing the images.

4.2.5.2.2 Number of Associations

Cios Fit (VA12A onwards) application initiates one association at a time for each different print device configured.

4.2.5.2.3 Asynchronous Nature

Cios Fit (VA12A onwards) application does not support asynchronous communication (multiple outstanding transactions over a single association).

4.2.5.2.4 Implementation Identifying Information

For Implementation Identifying Information please refer to “Table 3: Implementation Identifying Information” in the “Conformance Statement Overview”

4.2.5.3 Association Initiation Policy

When a print job is triggered, the Print Management SCU establishes an association by using the DICOM association services. An N-GET request determines the printer status prior to printing. If the printer status is "normal", the print job is started

4.2.5.3.1 Activity Print Film

4.2.5.3.1.1 Description and Sequencing of Activities

User can select the images for printing from Cios Fit (VA12A onwards) application. Two types of print film size are supported (14INX17IN and 8INX10IN). Once user trigger the print request Cios Fit (VA12A onwards) application send N-GET message to get the status of the printer. If the print association is established, Cios Fit (VA12A onwards) application will create film session by using N-CREATE.

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After that application create the image box and set the imaging attributes to be printed with N-SET message. Followed by N-ACTION will trigger the printing of the specified image. After the successful completion of printing, film box and film session will be deleting with N-DELETE command.

4.2.5.3.1.2 Proposed Presentation Context

Cios Fit (VA12A onwards) application will propose Presentation Contexts as shown in the following table:

Abstract Syntax		Transfer Syntax		Role
Description	**UID**	**Name**	**UID**	
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian.	1.2.840.10008.1.2	
Basic Film Session SOP Class	1.2.840.10008.5.1.1.1	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian.	1.2.840.10008.1.2	
Basic Film Box SOP Class	1.2.840.10008.5.1.1.2	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian.	1.2.840.10008.1.2	
Basic Grayscale Image Box SOP Class	1.2.840.10008.5.1.1.4	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian.	1.2.840.10008.1.2	
Printer SOP Class	1.2.840.10008.5.1.1.16	Explicit VR Little Endian.	1.2.840.10008.1.2.1	SCU
		Implicit VR Little Endian.	1.2.840.10008.1.2	

Table 15 : Presentation Context - Print Film

All below warning status code listed shall be treated as success.

1. All N-GET warning status codes are listed below:

Error Description	DICOM status code
Requested optional Attributes are not supported	0001
Attribute List Error	0107

Table 16 : N-GET warning status codes

2. All N-CREATE warning status codes are listed below:

Error Description	DICOM status code
Memory allocation not supported	B600
Min/Max Density out-range	B605
Attribute Value Out of Range	0116
Attribute List Error	0107

Table 17: N-CREATE warning status codes

3. All N-ACTION warning status codes are listed below:

Error Description	DICOM status code
Film session printing (collation) is not supported	B601
Film Session SOP Instance hierarchy does not contain Image Box SOP Instances (empty page)	B602
Film Box SOP Instance hierarchy does not contain Image Box SOP Instances (empty page)	B603

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Image size is larger than the Image Box size. The Image has been cropped to fit.	B609
Image size or Combined Print Image size is larger than the Image Box size. Image or Combined Print Image has been decimated to fit.	B60A
Memory allocation not supported	B600
Image size is larger than Image Box size. Image has been de-magnified	B604
Min/Max Density out-range	B605

Table 18: N-ACTION warning status codes

4. All N-SET warning status codes are treated as Success and are listed below:

Error Description	DICOM status code
Min/Max Density out-range	B605
Attribute Value Out of Range	0116
Attribute List Error	0107
Image size is larger than Image Box size. Image has been de-magnified	B604
Image size or Combined Print Image size is larger than the Image Box size. Image or Combined Print Image has been decimated to fit.	B60A
Image size is larger than the Image Box size. The Image has been cropped to fit.	B609

Table 19: N-SET warning status codes

4.2.5.3.1.3 SOP Specific Conformance

SOP classes and their used attributes for the PRINT operation.

Attribute Name	Tag	VR	Value	Presence of Value	Source
Basic Film Session SOP Class					
Affected SOP Class UID	0000,0002	UI	"1.2.840.10008.5.1.1.1"	ALWAYS	AUTO
Number of Copies	2000,0010	IS	<Number of copies from UI> It is integers from 1 to 3.	ALWAYS	USER
Print Priority	2000,0020	CS	MED	ALWAYS	CONFIG
Medium Type	2000,0030	CS	BLUE FILM	ALWAYS	CONFIG
Film Destination	2000,0040	CS	BIN_1	ALWAYS	CONFIG
Film Session Label	2000,0050	LO	Label	ALWAYS	CONFIG
Memory Allocation	2000,0060	IS	1024	ALWAYS	CONFIG
Basic Film Box SOP Class					
Affected SOP Class UID	0000,0002	UI	"1.2.840.10008.5.1.1.2"	ALWAYS	AUTO
Image Display Format	2010,0010	ST	STANDARD\C, R <C and R values depending on selected layout> STANDARD\1,1 STANDARD\1,2 STANDARD\2,1 STANDARD\2,2	ALWAYS	USER

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Attribute Name	Tag	VR	Value	Presence of Value	Source
			STANDARD\2,3 STANDARD\3,3		
Annotation Display Format ID	2010,0030	CS	NONE	ALWAYS	CONFIG
Film Orientation	2010,0040	CS	PORTRAIT	ALWAYS	CONFIG
Film Size ID	2010,0050	CS	<Paper size selected from UI.> 14INX17IN 8INX10IN	ALWAYS	USER
Magnification Type	2010,0060	CS	CUBIC	ALWAYS	CONFIG
Smoothing Type	2010,0080	CS	5	ALWAYS	CONFIG
Border Density	2010,0100	CS	BLACK	ALWAYS	CONFIG
Empty Image Density	2010,0110	CS	BLACK	ALWAYS	CONFIG
Min Density	2010,0120	US	10	ALWAYS	CONFIG
Max Density	2010,0130	US	180	ALWAYS	CONFIG
Trim	2010,0140	CS	NO	ALWAYS	CONFIG
Configuration Information	2010,0150	ST	CS400\CN0\PD1.2	ALWAYS	CONFIG
Reflected Ambient Light	2010,0160	US	10	ALWAYS	CONFIG
Illumination	2010,015e	US	2000	ALWAYS	CONFIG
Referenced Film Session Sequence	2010,0500	SQ		ALWAYS	AUTO
>Item 1					
>Referenced SOP Class UID	0008,1150	UI	"1.2.840.10008.5.1.1.1"	ALWAYS	AUTO
>Referenced SOP Instance UID	0008,1155	UI	<Affected SOP Instance UID of parent Basic Film Session returned by SCP>	ALWAYS	AUTO
Basic Grayscale Image Box SOP Class					
Requested SOP Instance UID	0000,1001	UI	<Referenced SOP Instance UID of Referenced Image Box Sequence returned by SCP>	ALWAYS	AUTO
Magnification Type	2010,0060	CS	CUBIC	ALWAYS	CONFIG

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Attribute Name	Tag	VR	Value	Presence of Value	Source
Smoothing Type	2010,0080	CS	5	ALWAYS	CONFIG
Image Box Position	2020,0010	US	<Depending on display format>	ALWAYS	AUTO
Polarity	2020,0020	CS	NORMAL	ALWAYS	CONFIG
Requested Image Size	2020,0030	DS	0.0	ALWAYS	CONFIG
Requested Decimate/ Crop Behavior	2020,0040	CS	DECIMATE	ALWAYS	CONFIG
Basic Grayscale Image Sequence	2020,0110	SQ		ALWAYS	AUTO
>Item 1					
>Samples Per Pixel	0028,0002	US	1	ALWAYS	CONFIG
>Photometric Interpretation	0028,0004	CS	MONOCHROME2	ALWAYS	CONFIG
>Rows	0028,0010	US	960	ALWAYS	CONFIG
>Columns	0028,0011	US	1042	ALWAYS	CONFIG
>Bits Allocated	0028,0100	US	8	ALWAYS	CONFIG
>Bits Stored	0028,0101	US	8	ALWAYS	CONFIG
>High Bit	0028,0102	US	7	ALWAYS	CONFIG
>Pixel Representation	0028,0103	US	0	ALWAYS	CONFIG
>Pixel Aspect Ratio	0028,0034	IS	1\1	ALWAYS	CONFIG
>Pixel Data	7FE0,0010	OW	Pixels of rendered film sheet.	ALWAYS	AUTO
Printer SOP Class					
Requested SOP Class UID	0000,0003	UI	“1.2.840.10008.5.1.1.16”	ALWAYS	AUTO
Requested SOP Instance UID	0000,1001	UI	“1.2.840.10008.5.1.1.17”	ALWAYS	AUTO

Table 20 : Print Service class description

The Printer SOP Class provides the possibility to monitor the status of the hardcopy printer in a synchronous way. The Cios Fit (VA12A onwards) uses the N-GET DIMSE service to get the printer status. The attributes listed in table below are supported.

Attribute Name	Attribute Tag	Value	Presence of Value
Printer Status	2110,0010	Provided by Printer	ALWAYS
Printer Status Info	2110,0020	Provided by Printer	ALWAYS

Table 21 : Attributes used to get the printer status (N-GET)

4.2.5.4 **Association Acceptance Policy**

n.a.

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4.3 Network Interfaces

4.3.1 Physical Network Interface

The DICOM Interface of Cios Fit (VA12A onwards) application provides DICOM TCP/IP network communication support and uses the TCP/IP protocol stack from the operating system. All available Ethernet interfaces are supported.

4.3.2 Additional Protocols

n.a.

4.3.3 IPv4 and IPv6 Support

IPv4 is supported.

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4.4 Configuration

4.4.1 AE Title/Presentation Address Mapping

According to the DICOM Standard, the AET string can be up to 16 characters long and must not contain any extended characters, only 7-bit ASCII characters (excluding Control Characters). Change of the default AE Titles chosen by the system can be performed in the Service UI under “Settings /User Settings/DICOM Configuration” Screen.

4.4.1.1 Local AE Titles

Change of the default AE Titles chosen by the system can be performed in the User Setting UI under "DICOM Configuration / Local Settings".

Application Entity	Default AE Title	TCP/IP Port
Worklist SCU	FLC_WK_SCU	104
Storage SCU	FLC_STORE_SCU	105
Print SCU	FLC_STORE_SCU	105

Table 22 : Default AET Characteristics

4.4.1.2 Remote AE Title/Presentation Address Mapping

4.4.1.2.1 Remote Association Initiators

All relevant remote applications that may setup DICOM associations towards Cios Fit (VA12A onwards) need to be configured in Cios Fit (VA12A onwards), before the association can be established. This behavior is configurable, but it is recommended, not to change this behaviour.

The mapping of external AE Titles to TCP/IP addresses and ports is configurable and initially set at the time of installation by Installation Personnel. Changes can later on also be performed by the local system administrator. The Application Entity Titles and supported transfer syntaxes need to be known for configuration.

To enable a fast and efficient configuration possibility Siemens will deliver templates for known configuration examples, so that the behavior (usage of one AE title, default port numbers, supported services) is determined already through the template.

Remote Application Entities can be configured without restarting the process.

For each remote AE the following data and capabilities can be configured:

Remote AE Configuration Item	Details
Host Name	Remote Host name
IP Address	Remote IP address
AE Title	Application Entity Name
Port No	Port Number
Description	This is a combo box and it contains three options (RIS, STORAGE & PRINTER)
Commitment Required	This will be visible only If “STORAGE” item is selected from the description combo box. This is used to set the commitment required or not after the export operation.

Table 23: Remote AET Configuration items

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4.4.1.2.2 Remote Association Acceptors

For remote applications that shall be able to accept DICOM associations from Cios Fit (VA12A onwards), the following information needs to be available:

- Application Entity Title
- Host Name / IP address on which the remote application service runs
- Port number on which the remote application accepts association requests.

The remote system will be indicated in the UI of Cios Fit (VA12A onwards) with a hostname, that is also entered when configuring the node in the DICOM Configuration UI.

4.4.2 **Parameters**

The following configurable parameters are available in the Cios Fit (VA12A onwards) DICOM application.

- Timeout value for receiving response from server: **20 sec**
- Number of retry for establishing connection with PACS/RIS/PRINT: **3**
- Interval between new connection retry to PACS/RIS/PRINT: **500 sec**
- Timeout value for commitment result in different association: **86400 sec**
- Timeout value for commitment result in same association: **10 sec**

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5 Media Interchange

5.1 Implementation Model

5.1.1 Application Data Flow Diagram

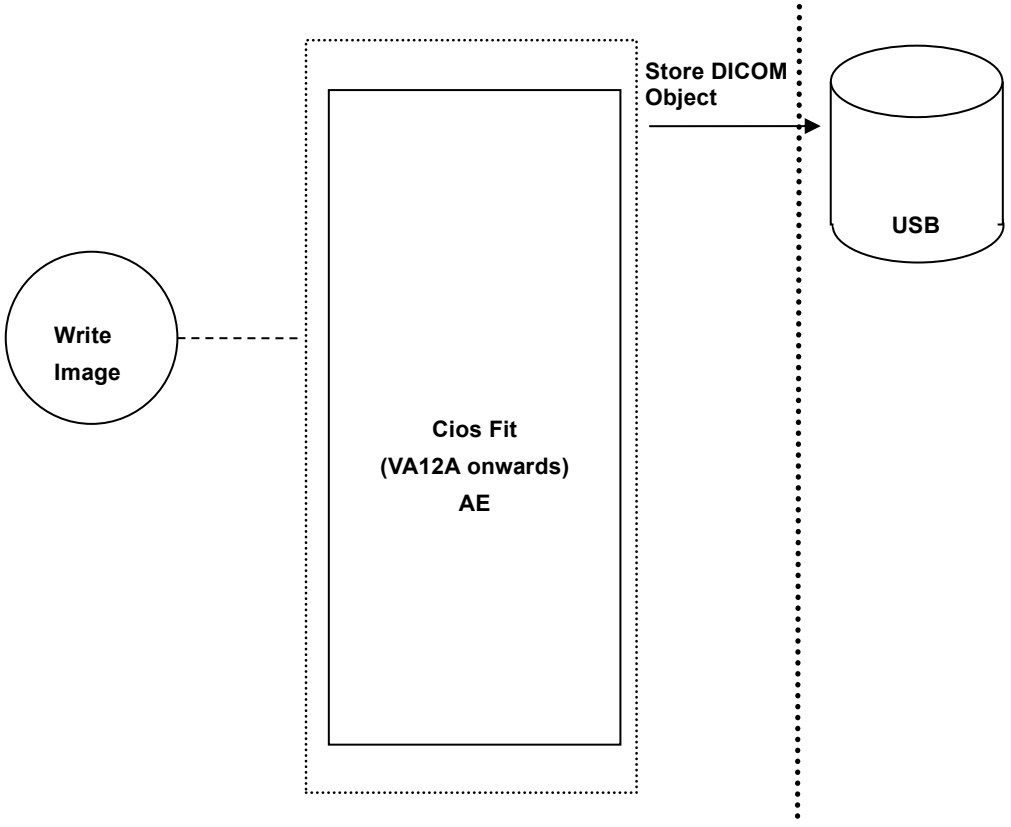

Figure 2: Media Interchange Application Data Flow Diagram

The Cios Fit (VA12A onwards) provides the functionality of Export DICOM Instances from Application Software to USB.

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5.1.2 Functional definitions of AEs

The Cios Fit (VA12A onwards) application is capable of

- creating a new File-set (DICOM File) in the File System (Export to USB without creating DICOMDIR)

5.1.3 Sequencing of Real-World Activities

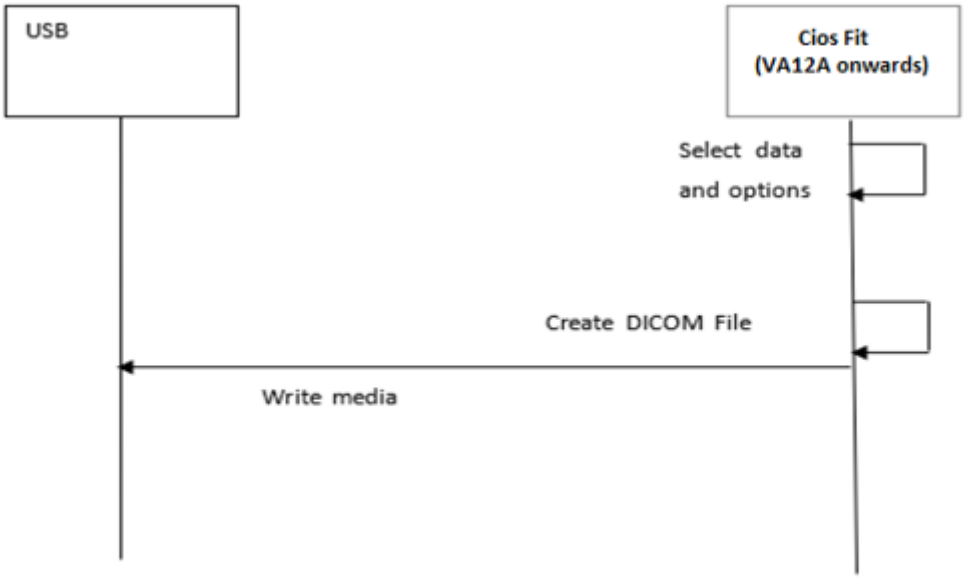

Figure 3: Sequence diagram – Media creation

5.1.4 File Meta Information for Implementation Class and Version

This section describes the values assigned to the File Meta Information attributes (see part PS 3.10) that pertain to the Implementation Class and Version. The implementation Class UID and the Implementation Version name in the File Meta Header are the same as the values specified for networking.

File Meta Information Version	0001
Implementation Class UID	1.3.12.2.1107.5.18.1
Implementation Version Name	SIEMENS_CIOS_FIT

Table 24: Implementation Class/Version Name - Media Interchange

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5.2 AE SPECIFICATIONS

5.2.1 Media Storage AE – Specification

The Cios Fit (VA12A onwards) provides conformance to the following Application Profiles.

Application Profiles Supported	Real-World Activity	Service Class Option
STD-GEN-USB-J2K	Export to local USB	Interchange

Table 25: Media - Application Profiles and Real-World Activities

5.2.1.1 Real-World Activities

5.2.1.1.1 Activity "Browse Directory Information"

n.a.

5.2.1.1.2 Real World Activity "Import into Application"

n.a.

5.2.1.1.3 Real-World Activity "Export to local Archive Media"

The Cios Fit (VA12A onwards) application copy SOP Instances to local USB based on User request.

Note: Cios Fit (VA12A onwards) application support export of XA Image and X-Ray Radiation Dose SR to the USB drive in DICOM format

5.2.1.2 SOP Classes and Transfer Syntaxes

These Application Profiles are based on the Media Storage Service Class with the Interchange Option. The Cios Fit provides Standard Conformance to the SOP Classes for XA Image and X-Radiation Dose SR.

Using the Application Profiles supporting compression (STD-GEN-USB-J2K) the following Transfer Syntaxes are supported:

UID value	Transfer Syntax	Image Objects	Non-Image Objects
1.2.840.10008.1.2.1	Explicit Value Representation Little Endian native	yes	yes

Table 26: Transfer Syntaxes for STD-GEN-USB-J2K

Using the Application Profiles that do not support compression (STD-GEN-USB) only Explicit Value Representation Little Endian (1.2.840.10008.1.2.1) is supported

5.3 AUGMENTED AND PRIVATE APPLICATION PROFILES

n.a.

5.4 MEDIA CONFIGURATION

n.a.

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6 Support of Extended Character Sets

Cios Fit (VA12A onwards) DICOM application supports the following character sets:

Language Area / Family	DICOM defined term	Norm registration	Description
Default repertoire	(none / resp.) ISO_IR 6	ISO 646 (ANS X3.4:1968)	ASCII Graphic character set
West-European9	ISO_IR 100	ISO 8859/1:1986 ECMA-94	Latin Alphabet No. 1 supplementary set
East Europe Slavic10	ISO_IR 101	ISO 8859/2:1986 ECMA-94	Latin Alphabet No. 2 supplementary set
All known languages	ISO_IR 192	ISO/IEC 10646	UTF-8, Unicode, covering all known languages
Chinese	GB18030	GB18030-2000	P.R. China norm GB18030
Simplified Chinese	GBK	GB 2312	GB 2312 China Association for Standardization
Simplified Chinese	ISO_IR_58	GB 2312-80	GB 2312-80 China Association for Standardization

Table 27: Extended Character Sets

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7 Attribute confidentiality profiles

7.1 De-identification

The Cios Fit (VA12A onwards) application can de-identify attributes, when exporting to media.

DICOM Tag	Attribute Name	Anonymized
(0010,0010)	Patient’s Name	Yes
(0010,0020)	Patient ID	Yes
(0010,0030)	Patient’s Birth Date	Yes
(0010,0040)	Patient's Sex	Yes
(0010,1010)	Patient's Age	Yes
(0008,0020)	Study Date	Yes
(0008,0023)	Content Date	Yes
(0008,0080)	Institution Name	Yes
(0008,0090)	Referring Physician's Name	Yes
(0008,1050)	Performing Physicians' Name	Yes
(0040,A123)	Person Name	Yes
(0008,0021)	Series Date	Yes
(0008,0050)	Accession Number	Yes
(0008,1010)	Station Name	Yes
(0008,1030)	Study Description	Yes
(0008,103E)	Series Description	Yes
(0008,1110)	Referenced Study Sequence	Yes
(0010,1020)	Patient's Size	Yes
(0010,1030)	Patient's Weight	Yes
(0018,1000)	Device Serial Numbers	Yes
(0020,0010)	Study ID	Yes
(0020,4000)	Image Comments	Yes
(0008,0104)	Radiation Datetime Started	Yes
(0040,1001)	Requested Procedure Id	Yes

Table 28: Application Level Confidentiality Profile attributes (standard tags)

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8 Security

Cios Fit (VA12A onwards) supports security with the firewall of the underlying operating system active. Cios Fit (VA12A onwards) only accepts DICOM communication from other AE if the related System is configured with its Hostname, Port, IP address and AET.

8.1 Security Profiles

n.a.

8.2 Association Level Security

Port number, IP address of the server and called/requested AET is validated during the creation of association.

8.3 Application Level Security

The Cios Fit can be used with User Management On/Off.

When user management is On. privileges are as per roles:

1. Emergency User – Can only create a Study only for an Emergency Patient.

2. Clinical User – Can create and access PHI/PII data for patients created by self and can access data from shared patients.

3. System Administrator

- Can assign/de-assign clinical/admin user privileges to/from a user.
- Can share/unshare Patients between groups.
- Can create/delete new users/groups.
- Can change passwords for other users/administrators.
- Administrator is also a clinical user.
- Can export/delete Audit logs.

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9 Annexes

9.1 IOD Contents

9.1.1 Created SOP Instances

The following table uses number of abbreviations. The abbreviations used in the “Presence of …” column is:

- **VNAP** - Value Not Always Present (attribute sent zero length if no value is present)
- **ANAP** - Attribute Not Always Present
- **ALWAYS** - Always Present
- **EMPTY** - Attribute is sent without a value

The abbreviations used in the “Source” column:

- **MWL** - The attribute value source Modality Worklist
- **USER** - The attribute value source is from User input
- **AUTO** - The attribute value is generated automatically
- **CONFIG** - The attribute value source is a configurable parameter

9.1.1.1 XA SOP Class

Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Specific Character set	0008,0005	CS	From Configuration / RIS	ALWAYS	RIS/CONFIG
Image Type	0008,0008	CS	ORIGINAL\PRIMARY\SINGLE PLANE	ALWAYS	AUTO
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.12.1	ALWAYS	AUTO
SOP Instance UID	0008,0018	UI	System generated. Same UID for different send	ALWAYS	AUTO
Study Date	0008,0020	DA	<yyyymmdd>	ALWAYS	AUTO
Series Date	0008,0021	DA	<yyyyMMdd>	ALWAYS	AUTO
Content Date	0008,0023	DA	<yyyymmdd>	ALWAYS	AUTO
Study Time	0008,0030	TM	<hhmmss>	ALWAYS	AUTO
Series Time	0008,0031	TM	<hhmmss>	ALWAYS	AUTO
Content Time	0008,0033	TM	<hhmmss>	ALWAYS	AUTO
Accession Number	0008,0050	SH	From RIS / empty	VNAP	RIS/AUTO
Modality	0008,0060	CS	XA	ALWAYS	AUTO
Manufacturer	0008,0070	LO	SIEMENS Healthineers	ALWAYS	AUTO
Institution Name	0008,0080	LO	From RIS / empty	VNAP	RIS

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Referring Physician's Name	0008,0090	PN	From RIS	ALWAYS	RIS
Study Description	0008,1030	LO	From RIS or Empty	VNAP	RIS/AUTO
Performing Physician's Name	0008,1050	PN	From RIS or input or "NotSet"	ALWAYS	RIS/USER/AUTO
Series Description	0008,103E	LO	"Raw Data"	ALWAYS	AUTO
Patient's Name	0010,0010	PN	From RIS or Input	ALWAYS	RIS/USER
Patient ID	0010,0020	LO	From RIS or Input	ALWAYS	RIS/USER
Patient's Birth Date	0010,0030	DA	From RIS or Input	ALWAYS	RIS/USER
Patient's Sex	0010,0040	CS	From RIS or Input	ALWAYS	RIS/USER
Patient's Age	0010,1010	AS	From RIS or Input <nnny>	ALWAYS	RIS/USER
Patient's Size	0010,1020	DS	From RIS or Empty	VNAP	RIS/AUTO
Patient's Weight	0010,1030	DS	From RIS or Empty	VNAP	RIS
Contrast/Bolus Agent	0018,0010	LO	n.a.	VNAP	AUTO
KVP	0018,0060	DS	<peak KV used> (KV)	ALWAYS	AUTO
Exposure Time	0018,1150	IS	<duration of x-Ray exposure>(msec)	ALWAYS	AUTO
X-Ray Tube Current	0018,1151	IS	<mA>	ALWAYS	AUTO
Radiation Setting	0018,1155	CS	SC	ALWAYS	AUTO
Positioner Primary Angle	0018,1510	DS	Zero Length	EMPTY	AUTO
Positioner Secondary Angle	0018,1511	DS	Zero Length	EMPTY	AUTO
Study instance UID	0020,000D	UI	From RIS or system generated	ALWAYS	RIS/AUTO
Series instance UID	0020,000E	UI	System generated.	ALWAYS	AUTO
Study ID	0020,0010	SH	From RIS or system generated	ALWAYS	RIS/AUTO
Series Number	0020,0011	IS	System generated	ALWAYS	AUTO
Instance Number	0020,0013	IS	System generated	ALWAYS	AUTO
Patient Orientation	0020,0020	CS	Zero Length	EMPTY	AUTO
Image Comments	0020,4000	LT	System generated	ALWAYS	AUTO
Samples per Pixel	0028,0002	US	1	ALWAYS	AUTO
Photometric Interpretation	0028,0004	CS	MONOCHROME2	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Rows	0028,0010	US	1024	ALWAYS	AUTO
Columns	0028,0011	US	1024	ALWAYS	AUTO
Bits Allocated	0028,0100	US	8	ALWAYS	AUTO
Bits Stored	0028,0101	US	8	ALWAYS	AUTO
High Bit	0028,0102	US	7	ALWAYS	AUTO
Pixel Representation	0028,0103	US	0	ALWAYS	AUTO
Pixel Intensity Relation-ship	0028,1040	CS	LIN	ALWAYS	AUTO
Pixel data	7FE0,0010	OW	Pixel Data.	ALWAYS	AUTO

Table 29 : Attributes exported during image export

9.1.1.2 **SC SOP Class**

9.1.1.2.1 Secondary Capture attribute list

Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Specific Character Set	0008,0005	CS	From RIS or system generated.	ALWAYS	RIS/CONFIG
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.7	ALWAYS	AUTO
SOP Instance UID	0008,0018	UI	System generated	ALWAYS	AUTO
Study Date	0008,0020	DA	<yyyymmdd>	ALWAYS	AUTO
Study Time	0008,0030	TM	<hhmmss>	ALWAYS	AUTO
Content Date	0008,0023	DA	Date of Original Acquisition (X-Ray event). <yyyymmdd>	ALWAYS	AUTO
Content Time	0008,0033	TM	Time of Original Acquisition (X-Ray event). <hhmmss>	ALWAYS	AUTO
Accession Number	0008,0050	SH	From RIS or Empty.	VNAP	RIS/AUTO
Modality	0008,0060	CS	OT	ALWAYS	AUTO
Manufacturer	0008,0070	LO	SIEMENS Healthineers	ALWAYS	AUTO
Conversion Type	0008,0064	CS	DI	ALWAYS	AUTO
Referring Physician's Name	0008,0090	PN	From RIS	ALWAYS	RIS
Study Description	0008,1030	LO	From RIS or Empty	VNAP	RIS/AUTO
Performing Physician’s Name	0008,1050	PN	From RIS or User input or "NotSet"	ALWAYS	RIS/USER/AUTO
Patient's Name	0010,0010	PN	From RIS or Input.	ALWAYS	RIS/USER
Patient ID	0010,0020	LO	From RIS or "Patient ID" input	ALWAYS	RIS /USER
Patient's Birth Date	0010,0030	DA	From RIS or User input	ALWAYS	RIS/USER
Patient's Sex	0010,0040	CS	From RIS or input (M or F or O)	ALWAYS	RIS/USER
Patient’s Age	0010,1010	AS	From RIS or Input <nnnY>	ALWAYS	RIS/USER
Study Instance UID	0020,000D	UI	From RIS or system generated.	ALWAYS	RIS/AUTO
Series Instance UID	0020,000E	UI	System generated.	ALWAYS	AUTO
Study ID	0020,0010	SH	From RIS or System generated.	ALWAYS	RIS/AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Series Number	0020,0011	IS	System generated.	ALWAYS	AUTO
Series Date	0008,0021	DA	System generated. <yyyyMMdd>	ALWAYS	AUTO
Series Time	0008,0031	TM	System generated. <hhmmss>	ALWAYS	AUTO
Institution Name	0008,0080	LO	From RIS or Empty.	VNAP	RIS/AUTO
Instance Number	0020,0013	IS	System generated.	ALWAYS	AUTO
Patient Orientation	0020,0020	CS	Empty.	EMPTY	AUTO
Image Comments	0020,4000	LT	System generated.	ALWAYS	AUTO
Series Description	0008,103E	LO	“Secondary Capture"	ALWAYS	AUTO
Source Image Sequence	0008,2112	SQ		ALWAYS	AUTO
>Item 1					
>Referenced SOP Class UID	0008,1150	UI	1.2.840.10008.5.1.4.1.1.12.1	ALWAYS	AUTO
> Referenced SOP Instance UID	0008,1155	UI	System generated. (0008,0018) of referenced XA image	ALWAYS	AUTO
Samples per Pixel	0028,0002	US	1	ALWAYS	AUTO
Photometric Interpretation	0028,0004	CS	MONOCHROME2	ALWAYS	AUTO
Rows	0028,0010	US	960	ALWAYS	AUTO
Columns	0028,0011	US	1042	ALWAYS	AUTO
Bits Allocated	0028,0100	US	8	ALWAYS	AUTO
Bits Stored	0028,0101	US	8	ALWAYS	AUTO
High Bit	0028,0102	US	7	ALWAYS	AUTO
Pixel Representation	0028,0103	US	0	ALWAYS	AUTO
Pixel data	7FE0,0010	OW	Pixel data with burned annotations	ALWAYS	AUTO

Table 30: Attributes exported during image export

9.1.1.2.2 SR Secondary Capture attribute list

Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Specific character Set	0008,0005	CS	From RIS or system generated	ALWAYS	RIS/AUTO
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.7	ALWAYS	AUTO
SOP Instance UID	0008,0018	UI	System generated	ALWAYS	AUTO
Study Date	0008,0020	DA	<yyyymmdd>	ALWAYS	AUTO
Study Time	0008,0030	TM	<hhmmss>	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Content Date	0008,0023	DA	empty	EMPTY	AUTO
Content Time	0008,0033	TM	empty	EMPTY	AUTO
Accession Number	0008,0050	SH	From RIS or Empty	VNAP	RIS/AUTO
Modality	0008,0060	CS	OT	ALWAYS	AUTO
Manufacturer	0008,0070	LO	SIEMENS Healthineers	ALWAYS	AUTO
Conversion Type	0008,0064	CS	DI	ALWAYS	AUTO
Referring Physician's Name	0008,0090	PN	From RIS	ALWAYS	RIS
Study Description	0008,1030	LO	From RIS or Empty	VANP	RIS/AUTO
Series Description	0008,103E	LO	"Secondary Capture Structured Report"	ALWAYS	AUTO
Performing Physician's Name	0008,1050	PN	From RIS or Input or "NotSet"	ALWAYS	RIS/USER/AUTO
Patient's Name	0010,0010	PN	From RIS or Input	ALWAYS	RIS/ USER/
Patient ID	0010,0020	LO	From RIS or Input	ALWAYS	RIS/ USER/
Patient's Birth Date	0010,0030	DA	From RIS or Input	ALWAYS	RIS/ USER/
Patient's Sex	0010,0040	CS	From RIS or Input (M or F or O)	ALWAYS	RIS /USER
Patient's Age	0010,1010	AS	From RIS or Input <nnnY>	ALWAYS	RIS/USER
Study Instance UID	0020,000D	UI	From RIS or system generated.	ALWAYS	RIS/AUTO
Series Instance UID	0020,000E	UI	System generated.	ALWAYS	AUTO
Study ID	0020,0010	SH	From RIS or system generated.	ALWAYS	RIS/AUTO
Series Number	0020,0011	IS	System generated.	ALWAYS	AUTO
Instance Number	0020,0013	IS	System generated.	ALWAYS	AUTO
Patient Orientation	0020,0020	CS	empty	EMPTY	AUTO
Samples per Pixel	0028,0002	US	1	ALWAYS	AUTO
Photometric Interpre-tation	0028,0004	CS	MONOCHROME2	ALWAYS	AUTO
Rows	0028,0010	US	1754	ALWAYS	AUTO
Columns	0028,0011	US	1240	ALWAYS	AUTO
Bits Allocated	0028,0100	US	16	ALWAYS	AUTO
Bits Stored	0028,0101	US	16	ALWAYS	AUTO
High Bit	0028,0102	US	15	ALWAYS	AUTO
Pixel Representation	0028,0103	US	0	ALWAYS	AUTO
Pixel Data	7FE0,0010	OW	Pixel data	ALWAYS	AUTO

Table 31: SR Secondary Capture attribute list

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9.1.1.3 **X-Ray Radiation Dose SR**

9.1.1.3.1 SR Attributes List (except SR Document Content attributes)

Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Specific Character Set	0008,0005	CS	From Configuration / RIS	ALWAYS	RIS/CONFIG
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.88.67	ALWAYS	AUTO
SOP Instance UID	0008,0018	UI	System generated.	ALWAYS	AUTO
Study Date	0008,0020	DA	<yyyymmdd>	ALWAYS	AUTO
Series Date	0008,0021	DA	<yyyymmdd>	ALWAYS	AUTO
Content Date	0008,0023	DA	Date of Original Acquisition (X-Ray event)	ALWAYS	AUTO
Content Time	0008,0033	TM	Time of Original Acquisition (X-Ray event) <hhmmss>	ALWAYS	AUTO
Study Time	0008,0030	TM	<hhmmss>	ALWAYS	AUTO
Series Time	0008,0031	TM	<hhmmss>	ALWAYS	AUTO
Accession Number	0008,0050	SH	From RIS / empty	VNAP	RIS/AUTO
Modality	0008,0060	CS	SR	ALWAYS	AUTO
Manufacturer	0008,0070	LO	SIEMENS Healthineers	ALWAYS	AUTO
Institution Name	0008,0080	LO	From RIS / empty	VNAP	RIS/AUTO
Referring Physician's Name	0008,0090	PN	From RIS	ALWAYS	RIS
Station Name	0008,1010	SH	From configuration	ALWAYS	CONFIG
Study Description	0008,1030	LO	From RIS / empty	VNAP	RIS/AUTO
Manufacturer's Model Name	0008,1090	LO	Cios Fit	ALWAYS	AUTO
Series Description	0008,103E	LO	"Structured Report"	ALWAYS	AUTO
Referenced Performed Procedure Step Sequence	0008,1111	SQ	Zero Length	EMPTY	AUTO
Patient's Name	0010,0010	PN	From RIS or Input	ALWAYS	RIS/USER
Patient ID	0010,0020	LO	From RIS or Input	ALWAYS	RIS/USER
Patient's Birth Date	0010,0030	DA	From RIS or Input	ALWAYS	RIS/USER
Patient's Sex	0010,0040	CS	From RIS or Input	ALWAYS	RIS/USER
Patient's Age	0010,1010	AS	From RIS or Input <nnnY>	ALWAYS	RIS/USER
Patient's Size	0010,1020	DS	From RIS or Empty	VNAP	RIS/AUTO
Patient's Weight	0010,1030	DS	From RIS or Empty	VNAP	RIS/AUTO
Study Instance UID	0020,000D	UI	From RIS or System generated.	ALWAYS	RIS/AUTO
Device Serial Number	0018,1000	LO	<modality serial number>	ALWAYS	AUTO
Software Version(s)	0018,1020	LO	From configuration.	ALWAYS	CONFIG
Series Instance UID	0020,000E	UI	System generated.	ALWAYS	AUTO
Study ID	0020,0010	SH	From RIS or System generated.	ALWAYS	RIS/AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Series Number	0020,0011	IS	System generated.	ALWAYS	AUTO
Instance Number	0020,0013	IS	System generated.	ALWAYS	AUTO
Completion Flag	0040, A491	CS	COMPLETE	ALWAYS	AUTO
Verification Flag	0040, A493	CS	UNVERIFIED	ALWAYS	AUTO
Referenced Request Sequence	0040, A370	SQ	From RIS	ANAP	RIS
>Item 1					
>Study Instance UID	0020,000D	UI	From RIS or System generated.	ALWAYS	RIS/AUTO
>Referenced Study Sequence	0008,1110	SQ	From RIS	VNAP	RIS
>>Item1					
>>Referenced SOP Class UID	0008,1150	UI	From RIS	ANAP	RIS
>>Referenced SOP Instance UID	0008,1155	UI	From RIS	ANAP	RIS
>Accession Number	0008,0050	SH	From RIS	ANAP	RIS
>Placer Order Number/Imaging Service Request	0040,2016	LO	From RIS	ANAP	RIS
>Filler Order Number/Imaging Service Request	0040,2017	LO	From RIS	ANAP	RIS
>Requested Procedure ID	0040,1001	SH	From RIS	ANAP	RIS
>Requested Procedure Description	0032,1060	LO	From RIS	ANAP	RIS
>Requested Procedure Code Sequence	0032,1064	SQ	From RIS	ANAP	RIS
>>Item1					
>>Code value	0008,0100	SH	From RIS	ANAP	RIS
>>Coding Scheme Designator	0008,0102	SH	From RIS	ANAP	RIS
>>Coding Scheme Version	0008,0103	SH	From RIS	ANAP	RIS
>>Code Meaning	0008,0104	LO	From RIS	ANAP	RIS
Performed Procedure Code Sequence	0040, A372	SQ	Zero Length	EMPTY	AUTO
Current Requested Procedure Evidence Sequence	0040, A375	SQ	Present if image exists for irradiation event.	ANAP	AUTO
>Item1					
>Referenced Series Sequence	0008,1115	SQ	Present if image is existing for irradiation event.	ANAP	AUTO
>>Item1					
>>Series Instance UID	0020,000E	UI	System generated	ANAP	AUTO
>>Referenced SOP Sequence	0008,1199	SQ	System generated. Multiple items are present if multiple images are acquired.	ANAP	AUTO
>>>Item1					
>>>Referenced SOP Class UID	0008,1150	UI	1.2.840.10008.5.1.4.1.1.12.1	ANAP	AUTO
>>>Referenced SOP Instance UID	0008,1155	UI	System generated	ANAP	AUTO
>Study Instance UID	0020,000D	UI	From RIS/System generated	ANAP	RIS/AUTO

Table 32: SR Attributes List (except SR Document Content attributes)

9.1.1.3.2 SR Document Content (X-Ray Radiation Dose SR IOD) Attributes

Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
Value Type	0040, A040	CS	CONTAINER	ALWAYS	AUTO
Concept name code sequence	0040, A043	SQ		ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>ITEM 1					
>Code Value	0008,0100	SH	113701	ALWAYS	AUTO
>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>Code Meaning	0008,0104	LO	X-Ray Radiation Dose Report	ALWAYS	AUTO
Continuity Of Content	0040,A050	CS	SEPARATE	ALWAYS	AUTO
Content Template Sequence	0040, A504	SQ		ALWAYS	AUTO
>ITEM 1					
>Mapping Resource	0008,0105	CS	DCMR	ALWAYS	AUTO
> Template Identifier	0040,DB00	CS	10001	ALWAYS	AUTO
Content Sequence	0040,A730	SQ		ALWAYS	AUTO
>ITEM 1					
> Relationship Type	0040,A010	CS	HAS CONCEPT MOD	ALWAYS	AUTO
> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	121058	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Procedure reported	ALWAYS	AUTO
>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	113704	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Projection X-Ray	ALWAYS	AUTO
>Content Sequence	0040,A730	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Relationship Type	0040,A010	CS	HAS CONCEPT MOD	ALWAYS	AUTO
>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>> Code Value	0008,0100	SH	G-C0E8	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	SRT	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Has Intent	ALWAYS	AUTO
>>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	R-408C3	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	SRT	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Diagnostic Intent	ALWAYS	AUTO
>ITEM 2					
>Relationship Type	0040,A010	CS	HAS OBS CONTEXT	ALWAYS	AUTO
>Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	121005	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Observer Type	ALWAYS	AUTO
>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	121006	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Person	ALWAYS	AUTO
>ITEM 3					
>Relationship Type	0040,A010	CS	HAS OBS CONTEXT	ALWAYS	AUTO
>Value Type	0040,A040	CS	PNAME	ALWAYS	AUTO
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	121008	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Person Observer Name	ALWAYS	AUTO
>Person Name	0040,A123	PN	From RIS or “NotSet”.	ALWAYS	RIS/ AUTO
>ITEM 4					
>Relationship Type	0040,A010	CS	HAS OBS CONTEXT	ALWAYS	AUTO
>Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	121011	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Person Observer's Role in this Procedure	ALWAYS	AUTO
>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	113851	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Irradiation Administering	ALWAYS	AUTO
>ITEM 5					
>Relationship Type	0040,A010	CS	HAS OBS CONTEXT	ALWAYS	AUTO
>Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	113705	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Scope of Accumulation	ALWAYS	AUTO
>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	113014	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Study	ALWAYS	AUTO
> Content Sequence	0040,A730	SQ		ALWAYS	AUTO
>>ITEM 1					
>> Relationship Type	0040,A010	CS	HAS PROPERTIES	ALWAYS	AUTO
>>Value Type	0040,A040	CS	UIDREF	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	110180	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Study Instance UID	ALWAYS	AUTO
>> Study UID	0040,A124	UI	From RIS / System generated	ALWAYS	RIS / AUTO
>ITEM 6					
>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>Value Type	0040,A040	CS	CONTAINER	ALWAYS	AUTO
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	113702	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Accumulated X-Ray Dose Data	ALWAYS	AUTO
>Continuity of Content	0040,A050	CS	CONTINUOUS	ALWAYS	AUTO
> Content Sequence	0040,A730	SQ		ALWAYS	AUTO
>>ITEM 1					
>> Relationship Type	0040,A010	CS	HAS CONCEPT MOD	ALWAYS	AUTO
>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113764	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Acquisition Plane	ALWAYS	AUTO
>>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113622	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Single Plane	ALWAYS	AUTO
>>ITEM 2					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040,A040	CS	CONTAINER	ALWAYS	AUTO
>>Concept name code sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code value	0008,0100	SH	122505	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Calibration	ALWAYS	AUTO
>>Continuity of Content	0040,A050	CS	CONTINUOUS	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>> Content Sequence	0040,A730	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>> Relationship Type	0040,A010	CS	HAS CONCEPT MOD	ALWAYS	AUTO
>>>Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	113794	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	Dose Measurement Device	ALWAYS	AUTO
>>>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	A-2C090	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	SRT	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	Dosimeter	ALWAYS	AUTO
>>>ITEM 2					
>>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>> Value Type	0040,A040	CS	DATETIME	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	113723	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	Calibration DateTime	ALWAYS	AUTO
>>> DateTime	0040,A120	DT	From Configuration	ALWAYS	CONFIG
>>>ITEM3					
>>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	122322	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	Calibration Factor	ALWAYS	AUTO
>>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>>ITEM 1					
>>>>>Code Value	0008,0100	SH	1	ALWAYS	AUTO
>>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>>Code Meaning	0008,0104	LO	no units	ALWAYS	AUTO
>>>>Numeric Value	0040,A30A	DS	1	ALWAYS	AUTO
>>>ITEM4					
>>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	113763	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	Calibration Uncertainty	ALWAYS	AUTO
>>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>>ITEM 1					
>>>>>Code Value	0008,0100	SH	%	ALWAYS	AUTO
>>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>>Code Meaning	0008,0104	LO	Percent	ALWAYS	AUTO
>>>>Numeric Value	0040,A30A	DS	From Configuration	ALWAYS	CONFIG
>>>ITEM5					
>>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>> Value Type	0040,A040	CS	TEXT	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	113724	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	Calibration Responsible Party	ALWAYS	AUTO
>>>Text Value	0040,A160	UT	From Configuration	ALWAYS	CONFIG
>>>ITEM6					
>>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>> Value Type	0040,A040	CS	TEXT	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	113720	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	Calibration Protocol	ALWAYS	AUTO
>>>Text Value	0040,A160	UT	Standard	ALWAYS	AUTO
>>ITEM 3					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113726	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Fluoro Dose Area Product Total	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	mGy.m2	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mGy.m2	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>ITEM 4					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113728	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Fluoro Dose (RP) Total	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	mGy	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mGy	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>ITEM 5					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113730	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Total Fluoro Time	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>ITEM 1					

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>>>Code Value	0008,0100	SH	s	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	s	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>ITEM 6					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113727	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Acquisition Dose Area Product Total	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	mGy.m2	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mGy.m2	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>ITEM 7					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113729	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Acquisition Dose (RP) Total	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	mGy	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mGy	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>ITEM 8					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113855	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Total Acquisition Time	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	s	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	s	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>ITEM 9					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113722	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Dose Area Product Total	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>ITEM 1					

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	mGy.m2	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mGy.m2	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>ITEM 10					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113725	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Dose (RP) Total	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>ITEM 1					
>>>>Code Value	0008,0100	SH	mGy	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mGy	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>ITEM 11					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113780	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Reference Point Definition	ALWAYS	AUTO
>> Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>ITEM 1					
>>>Code Value	0008,0100	SH	113861	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	30cm from detector	ALWAYS	AUTO
>ITEM 7					
> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	113854	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Source of Dose Information	ALWAYS	AUTO
> Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>ITEM 1					
>>Code Value	0008,0100	SH	113856	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Automated Data Collection	ALWAYS	AUTO
>ITEM 8					
> Relationship Type	0040,A010	CS	CONTAINS Refer Table 34: Attributes of Irradiation Event X-Ray Data	ALWAYS	AUTO

Table 33: Attributes of SR Document Content

9.1.1.3.3 Irradiation Event X-Ray Data Attributes

Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
> Item8					
>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>Value Type	0040,A040	CS	CONTAINER	ALWAYS	AUTO
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>Item 1					
>>Code Value	0008,0100	SH	113706	ALWAYS	AUTO
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>Code Meaning	0008,0104	LO	Irradiation Event X-Ray Data	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>Continuity of Content	0040,A050	CS	CONTINUOUS	ALWAYS	AUTO
>Content Sequence	0040,A730	SQ		ALWAYS	AUTO
>> Item1					
>> Relationship Type	0040,A010	CS	HAS CONCEPT MOD	ALWAYS	AUTO
>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113764	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Acquisition Plane	ALWAYS	AUTO
>> Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113622	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Single Plane	ALWAYS	AUTO
>> Item2					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	UIDREF	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113769	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Irradiation Event UID	ALWAYS	AUTO
>> Irradiation Event UID	0040,A124	UI		ALWAYS	AUTO
>>Item3					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	DATETIME	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	111526	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	DateTime Started	ALWAYS	AUTO
>> DateTime	0040,A120	DT	System generated	ALWAYS	AUTO
>>Item4					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113721	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Irradiation Event Type	ALWAYS	AUTO
>> Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	P5-06000	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	SRT	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Fluoroscopy / Stationary Acquisition	ALWAYS	AUTO
>>Item5					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	TEXT	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	125203	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Acquisition Protocol	ALWAYS	AUTO
>>Text Value	0040,A160	UT	Standard	ALWAYS	AUTO
>>Item 6					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	123014	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Target Region	ALWAYS	AUTO
>> Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	T-D0010	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	SRT	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Entire body	ALWAYS	AUTO
>>Item7					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	122130	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Dose Area Product	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	mGy.m2	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mGy.m2	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>Item8					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	IMAGE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113795	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Acquired Image	ALWAYS	AUTO
>> Referenced SOP Sequence	0008,1199	SQ		ALWAYS	AUTO
>>>Item1					
>>>Referenced SOP Class UID	0008,1150	UI	1.2.840.10008.5.1.4.1.1.12.1	ALWAYS	AUTO
>>> Referenced SOP Instance UID	0008,1155	UI	Value of 'SOP instance UID'.	ALWAYS	AUTO
>> Item9					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113738	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Dose (RP)	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item1					
>>> Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	mGy	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mGy	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>Item 10					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113780	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Reference Point Definition	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>> Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113861	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	30cm from detector	ALWAYS	AUTO
>>Item 11					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	113732	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Fluoro Mode	ALWAYS	AUTO
>>Concept Code Sequence	0040,A168	SQ	System generated	ANAP	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	If Fluoro mode is, 1.Continuous – 113630 2.Pulsed - 113631	ANAP	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ANAP	AUTO
>>>Code Meaning	0008,0104	LO	Continuous or Pulsed based on Fluoro mode.	ANAP	AUTO
>>Concept Code Sequence	0040,A168	SQ	System generated	ANAP	AUTO
>>Item12					
>> Relationship Type	0040,A010	CS	CONTAINS	ANAP	AUTO
>> Value Type	0040,A040	CS	NUM	ANAP	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ANAP	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113791	ANAP	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ANAP	AUTO
>>>Code Meaning	0008,0104	LO	Pulse Rate	ANAP	AUTO
>> Measured Value Sequence	0040,A300	SQ		ANAP	AUTO
>>>Item1					
>>> Measurement Units Code Sequence	0040,08EA	SQ		ANAP	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	{pulse}/s	ANAP	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ANAP	AUTO
>>>>Code Meaning	0008,0104	LO	pulse/s	ANAP	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ANAP	AUTO
>>Item13					
>>Relationship Type	0040,A010	CS	CONTAINS	ANAP	AUTO
>>Value Type	0040,A040	CS	NUM	ANAP	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ANAP	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113768	ANAP	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ANAP	AUTO
>>>Code Meaning	0008,0104	LO	Number of Pulses	ANAP	AUTO
>> Measured Value Sequence	0040,A300	SQ		ANAP	AUTO
>>>Item1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ANAP	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	1	ANAP	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ANAP	AUTO
>>>>Code Meaning	0008,0104	LO	no units	ANAP	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ANAP	AUTO
>>Content Sequence	0040,A730	SQ		ANAP	AUTO
>>>Item1					
>>>Relationship Type	0040,A010	CS	HAS CONCEPT MOD	ANAP	AUTO
>>>Value Type	0040,A040	CS	CODE	ANAP	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ANAP	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	121401	ANAP	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ANAP	AUTO
>>>>Code Meaning	0008,0104	LO	Derivation	ANAP	AUTO
>>> Concept Code Sequence	0040,A168	SQ		ANAP	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	R-10260	ANAP	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	SRT	ANAP	AUTO
>>>>Code Meaning	0008,0104	LO	Estimated	ANAP	AUTO
>>Item14					
>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113793	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Pulse Width	ALWAYS	AUTO
>>Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	ms	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	ms	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>Item15					
>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113742	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Irradiation Duration	ALWAYS	AUTO
>>Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	s	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	s	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>Item16					
>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113733	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	KVP	ALWAYS	AUTO
>>Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	kV	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	kV	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>Item17					
>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040,A040	CS	NUM	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113734	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	X-Ray Tube Current	ALWAYS	AUTO
>>Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	mA	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mA	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated.	ALWAYS	AUTO
>>Item18					
>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item1					
>>>Code Value	0008,0100	SH	113824	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Exposure Time	ALWAYS	AUTO
>>Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item1					
>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item1					
>>>>Code Value	0008,0100	SH	ms	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	ms	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>>Item19					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>> Item 1					
>>>Code Value	0008,0100	SH	113766	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Focal Spot Size	ALWAYS	AUTO
>>Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item 1					
>>> Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item 1					
>>>>Code Value	0008,0100	SH	mm	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mm	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	0.6	ALWAYS	AUTO
>>Item20					
>> Relationship Type	0040,A010	CS	CONTAINS	ANAP	AUTO
>> Value Type	0040,A040	CS	NUM	ANAP	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ANAP	AUTO
>>> Item 1					
>>>Code Value	0008,0100	SH	113731	ANAP	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ANAP	AUTO
>>>Code Meaning	0008,0104	LO	Total Number of Radiographic Frames	ANAP	AUTO
>>Measured Value Sequence	0040,A300	SQ		ANAP	AUTO
>>>>Item 1					
>>> Measurement Units Code Sequence	0040,08EA	SQ		ANAP	AUTO
>>>>Code Value	0008,0100	SH	1	ANAP	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ANAP	AUTO
>>>>Code Meaning	0008,0104	LO	no. units	ANAP	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>>Numeric Value	0040,A30A	DS	1	ANAP	AUTO
>> Item 21					
>> Relationship Type	0040, A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040, A040	CS	CONTAINER	ALWAYS	AUTO
>>Concept Name Code Sequence	0040, A043	SQ			
>>>Item 1					
>>>Code Value	0008,0100	SH	113771	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	X-RayFilters	ALWAYS	AUTO
>> Continuity Of Content	0040,A050	CS	CONTINUOUS	ALWAYS	AUTO
>> Content Sequence	0040,A730	SQ			
>>> Item 1					
>>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>> Item 1					
>>>>Code Value	0008,0100	SH	113772	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	X-Ray Filter Type	ALWAYS	AUTO
>>> Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>> Item 1					
>>>>Code Value	0008,0100	SH	111609	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	Strip Filter	ALWAYS	AUTO
>>> Item 2					
>>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>> Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>>Item 1					
>>>>Code Value	0008,0100	SH	113757	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	X-Ray Filter Material	ALWAYS	AUTO
>>> Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>>Item 1					
>>>>Code Value	0008,0100	SH	"C-150F9"	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	"SRT"	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	Copper and Aluminium	ALWAYS	AUTO
>>> Item 3					
>>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ			
>>>>Item 1					
>>>>Code Value	0008,0100	SH	113758	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	X-Ray Filter Thickness Minimum	ALWAYS	AUTO
>>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>>Item 1					
>>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>>Item 1					
>>>>>Code Value	0008,0100	SH	mm	ALWAYS	AUTO
>>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>>Code Meaning	0008,0104	LO	mm	ALWAYS	AUTO
>>>>Numeric Value	0040,A30A	DS	0.1	ALWAYS	AUTO
>>> Item 4					
>>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>>Item 1					
>>>>Code Value	0008,0100	SH	113773	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	X-Ray Filter Thickness Maximum	ALWAYS	AUTO
>>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>>>Item 1					
>>>>Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>>Item 1					
>>>>>Code Value	0008,0100	SH	mm	ALWAYS	AUTO
>>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>>Code Meaning	0008,0104	LO	mm	ALWAYS	AUTO
>>>>Numeric Value	0040,A30A	DS	1.0	ALWAYS	AUTO
>> Item 22					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	113790	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Collimated Field Area	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>> Item 1					
>>> Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item 1					
>>>>Code Value	0008,0100	SH	cm2	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	cm2	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>> Item 23					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	113788	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Collimated Field Height	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>> Item 1					
>>> Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item 1					
>>>>Code Value	0008,0100	SH	mm	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mm	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	147	ALWAYS	AUTO
>> Item 24					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	113789	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Collimated Field Width	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>> Item 1					
>>> Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>Item 1					
>>>>Code Value	0008,0100	SH	mm	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mm	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	System generated	ALWAYS	AUTO
>> Item 25					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item 1					

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>>Code Value	0008,0100	SH	113737	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Distance Source to Reference Point	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>> Item 1					
>>> Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>> Item 1					
>>>>Code Value	0008,0100	SH	mm	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mm	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	690	ALWAYS	AUTO
>> Item 26					
>> Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>> Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	113750	ALWAYS	AUTO
>>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Distance Source to Detector	ALWAYS	AUTO
>> Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>> Item 1					
>>> Measurement Units Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>> Item 1					
>>>>Code Value	0008,0100	SH	mm	ALWAYS	AUTO
>>>>Coding Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	mm	ALWAYS	AUTO
>>>Numeric Value	0040, A30A	DS	990	ALWAYS	AUTO
>>Item 27					
>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>item 1					
>>>Code Value	0008,0100	SH	113745	ALWAYS	AUTO
>>>Code Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Patient Table Relationship	ALWAYS	AUTO
>>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	F-10470	ALWAYS	AUTO
>>>Code Scheme Designator	0008,0102	SH	SRT	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	headfirst	ALWAYS	AUTO
>>Item 28					
>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040, A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040, A043	SQ		ALWAYS	AUTO
>>>item 1					
>>>Code Value	0008,0100	SH	113743	ALWAYS	AUTO
>>>Code Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Patient Orientation	ALWAYS	AUTO
>>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	F-10450	ALWAYS	AUTO
>>>Code Scheme Designator	0008,0102	SH	SRT	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	recumbent	ALWAYS	AUTO
>>Item 29					
>>Relationship Type	0040,A010	CS	HAS CONCEPT MODE	ALWAYS	AUTO
>>Value Type	0040,A040	CS	CODE	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>item 1					
>>>Code Value	0008,0100	SH	113744	ALWAYS	AUTO
>>>Code Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Patient Orientation Modifier	ALWAYS	AUTO

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Attribute Name	Attribute tag	VR	Value	Presence of Value	Source
>>Concept Code Sequence	0040,A168	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Code Value	0008,0100	SH	F-10340	ALWAYS	AUTO
>>>Code Scheme Designator	0008,0102	SH	SRT	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	supine	ALWAYS	AUTO
>>Item 30					
>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>item 1					
>>>Code Value	0008,0100	SH	112011	ALWAYS	AUTO
>>>Code Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Positioner Primary Angle	ALWAYS	AUTO
>>Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Measurement Unit Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>item 1					
>>>>Code Value	0008,0100	SH	deg	ALWAYS	AUTO
>>>>Code Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	°	ALWAYS	AUTO
>>>Numeric Value	0040,A30A	DS	0	ALWAYS	AUTO
>>Item 31					
>>Relationship Type	0040,A010	CS	CONTAINS	ALWAYS	AUTO
>>Value Type	0040,A040	CS	NUM	ALWAYS	AUTO
>>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	AUTO
>>>item 1					
>>>Code Value	0008,0100	SH	112012	ALWAYS	AUTO
>>>Code Scheme Designator	0008,0102	SH	DCM	ALWAYS	AUTO
>>>Code Meaning	0008,0104	LO	Positioner Secondary Angle	ALWAYS	AUTO
>>Measured Value Sequence	0040,A300	SQ		ALWAYS	AUTO
>>>Item 1					
>>>Measurement Unit Code Sequence	0040,08EA	SQ		ALWAYS	AUTO
>>>>item 1					
>>>>Code Value	0008,0100	SH	deg	ALWAYS	AUTO
>>>>Code Scheme Designator	0008,0102	SH	UCUM	ALWAYS	AUTO
>>>>Code Meaning	0008,0104	LO	°	ALWAYS	AUTO
>>>Numeric Value	0040, A30A	DS	0	ALWAYS	AUTO

Table 34: Attributes of Irradiation Event X-Ray Data

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9.2 Data Dictionary of Private Attributes

Not applicable as Cios Fit does not support private attributes.

9.3 Coded Terminology and Templates

9.3.1 Context Groups

n.a.

9.3.2 Template Specifications

The Cios Fit (VA12A onwards) will create X-Ray Radiation Dose SRs implementing TID 10001 Projection X-Ray Radiation Dose.

For every single irradiation event an entry is made into the SR. Reference Point Definition is “30cm from detector”.

The following 2 tables describe main attributes.

Concept Name	Comment
Dose Area Product Total	The accumulated dose area product (measured with dose chamber) including fluoro and acquisition
Dose (RP) Total	Calculated accumulated dose at the RP applied during fluoro and acquisition

Table 35: Accumulated X-Ray Dose Data

Concept Name	Comment
Irradiation Event Type	Fluoroscopy/Stationary Acquisition
Acquisition Protocol	Standard
Dose Area Product	Dose Area Product applied
Dose (RP)	Calculated dose at the Reference Point
X-Ray Filters	Information about used filter
Fluoro Mode	Pulsed | Continuous
Pulse Rate	Used Pulse Rate
Number of Pulses	Number of X-Ray pulses
KVP	Mean value
X-Ray Tube Current	Mean value in mA
Exposure Time	Total time the patient has received X-Ray exposure during the irradiation event.
Pulse Width	Average Pulse Width
Exposure	Exposure in µAs
Target Region	Entire Body
Distance Source to Detector	SID in mm

Table 36: Dose SR Irradiation Event Data

9.3.3 Private Code definitions

n.a.

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9.4 Grayscale Image Consistency

The high resolution TFT display monitor option of Cios Fit (VA12A onwards) comes with a DICOM Grayscale Standard Display Function (GSDF) compliant factory pre-setting. A typical working environment setup is assumed for ambient light.

9.5 Standard Extended / Specialized / Private SOP Classes

n.a.

9.6 Private Transfer Syntaxes

No private Transfer Syntaxes are defined for or requested by Cios Fit (VA12A onwards) DICOM application.

9.7 DICOM Print SCU – detailed status displays

n.a.

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EU Authorized Representative
Siemens Healthcare GmbH
Henkestr. 127
91052 Erlangen
Germany

Siemens Healthineers Headquarters
Siemens Healthcare GmbH
Henkestr. 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
siemens-healthineers.com

Manufacturer
Siemens Healthcare Pvt. Ltd.
Unit No. 9A, 9th Floor, North Tower,
Godrej One, Pirojshanagar
Vikhroli East Mumbai 400079
India

Published by Siemens Healthcare GmbH - A91AT-40020-55T4-7600 - Printed in Germany - © Siemens Healthcare GmbH, 11 2021